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Proceedings of the SIGGreen 2010 Workshop: An Introduction

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Proceedings of the SIGGreen 2010 Workshop: An Introduction

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Abstract
The SIGGreen Workshop Progam in 2010 was designed to establish the SIGGreen community and scope the area of Green IS. The program contained both a â virtualâ component and a â face to faceâ component in order to enrich the experience of participants in an environmentally responsible way. This Introduction to the Proceedings of the Workshop describes the program of activities and provides an overview of the Green IS themes generated at the workshop.

Keywords: Proceedings, Green IS, SIGGreen, ICIS2010

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Introduction

SIGGreen[1] 2010 Workshop Proceedings

Theme: Information Systems and Environmentally Sustainable Development

Chairs: Helen Hasan, University Wollongong, Australia

Cathy Dwyer, Pace University, NY, USA

SIGGreen was formed in 2009 as a special interest group (SIG) of the Association of Information Systems (AIS) by a number of IS researchers and professionals to further the development of new applications of technology that support environmentally sustainable outcomes. The papers collected here are the product of a program of activities carried out by members of SIGGreen in 2010.

The goal of the SIGGreen program was to build a community of 'Green IS' researchers in the most effective and environmentally sustainable way. The first objective for SIGGreen was to conduct a collaborative review and scoping of the field of Green IS.

The program to establish the SIGGreen community contained both a 'virtual' component and a 'face to face' component. SIGGreen members used online social media and collaboration tools to plan and execute a 24 hour global virtual workshop, held November 12, 2010. The virtual workshop had 21 abstracts presented, with 240 visitors from 32 countries in attendance To see the archive of the workshop go to http://siggreen-icis2010-workshop.wikispaces.com/ .

This was followed by a face to face workshop at the International Conference of Information Systems (ICIS), on December 11, 2010, in St Louis, MO, USA, where authors gave brief presentations of their work. Using feedback from the virtual workshop and the face to face workshop, authors then prepared the 20 papers included in these proceedings.

In this brief introduction to the papers, we first describe the program designed to explore ways to be environmentally responsible in conducting the workshop activities. We then provide overviews of each of the themes identified by workshop participants and list the papers contributing to each theme.

[1] SIGGreen is a Special Interest Group of the Association for Information Systems

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The Program of Activities

SIGGreen was formed as a Special Interest Group of the Association for IS in 2009 to support Green IS research. In 2010 a program of activities was held to generate directions and goals for SIGGreen. This program consisted of the following:

1. **October 8th 2010 Initial Abstracts**. The call for abstract (300-500 words) on any aspects of Green IS. Acceptance of abstracts was determined by the chairs based on quality and relevance to the aims of SIGGreen.

2. **October 22nd 2010 Notified of Acceptance**. Authors were asked to create a presentation (a short paper, slides with commentary, and/or video) to be uploaded into a Wiki by November 10th 2010 for a 1 day virtual event. Authors were subsequently invited to present the short papers at the pre-ICIS Workshop.

3. **November 12th 2010**. **The Virtual Event:** The program of presentations was scheduled to suit time-zones and advertised to invite general participation. Authors and participants could register by requesting to join the Wiki. Presenters used the dedicated discussion forum on their page to interact with virtual attendees who could ask questions and make comments. Both synchronous and asynchronous discussion could be accommodated and recorded for viewing by all registrants. A general meeting space was also provided.

4. **November 30th 2010**. **Short Paper Submissions** Authors submitted a short paper via Sprouts for discussion at the pre-ICIS Workshop. This was based on their original accepted abstract and incorporated feedback from the Virtual Event.

5. **December 11th 2010 Pre-ICIS workshop**. The presentation of short papers followed by a session to arrange them into themed topic areas for this e-publication on Sprouts.

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Theme: Contributions to solving the sustainability problem

This set of papers are solution oriented either directly (i.e., presenting a solution) or indirectly (providing a framework for guiding solutions). Implicitly, they all address the critical question of the age of sustainability, "What is the impact?" The papers also recognized that all Information Systems solutions exist within the boundaries of a constrained socio-technical system. New systems create, or attempt to create, new social orderings and relationships but are very much limited to anchoring and adjusting from the current state. While there are often more degrees of freedom in implementing a new information technology, new information systems must typically fit within the constraints of the existing infrastructure and organizational culture. Thus, Green IS suffers from the same problems as any information systems. The constraints of the old will likely limit many solutions to the eco-efficiency spectrum and not generate the radical change required to attain eco-effectiveness.

Two levels of analyses are evident in the papers. At the organizational level, a socio-technical analysis, balanced scorecard, and business planning framework are considered. The second level of analysis deals with processes and measurement, and these two are intertwined. The effects of processes need to be measured, and we need processes for ensuring accurate measurement.

Papers contributing to this theme are:

Defining the Role for Information Systems in Sustainability Measurement. Jacqueline Corbett, Jane Webster, Marie-Claude Boudreau, Richard T. Watson

Socio-technical Analysis and Environmental Sustainability
Catherine Dwyer

Call for Action: Investigating the Role of Business Process Management in Green IS
Stefan Seidel, Jan vom Brocke

A Presentation of the Green IT Balanced Scorecard from an Environmental Perspective. Yulia Wati, Chulmo Koo

Business Canvas for Energy Informatics
Richard T. Watson, Tyler Williamson, Marie-Claude Boudreau, Siyuan Li, Zhenxiang Zeng, Hebei

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Theme: Integrating Green IS into Courses and Curricula

This set of papers address the challenges and opportunities that flow from integration of 'Green IS' and environmental sustainability topics into the curriculum for computing students. As environmental sustainability attracts significant attention, colleges and universities have received positive notice for their greening efforts, and the academy is expected to be a leader in efforts to improve sustainability. Many information systems concepts and themes are highly relevant to sustainability, since economic, social, technical, and cognitive components all influence the consumption of natural resources. This presents a strategic opportunity to expand information systems curricula, as well as make a concrete contribution to the urgent issue of transforming economic, political and cultural processes to respect and renew constrained resources.

In "Selecting appropriate frameworks for understanding how sustainability concepts are applied to solving global problems such as those addressed by United Nations Millennium Development Goals," Linda Jo Calloway presents examples of class assignments that prompt students to analyze the role of information technology and design information systems in efforts to meet global development goals set forth by the UN that address world hunger, poverty, and environmental sustainability.

The paper "Green IT in the IS Curriculum Can Generate Enrollment Increases," by Jeffrey W. Merhout, suggests developing courses and concentrations in sustainable information systems, engaging students in sustainable/green IT issues through student organizations, and developing real-world Green IS projects for students right on campus.

In "Green IS in teaching – specialist or generalist?", by Colin Pattinson and Neil A. Gordon, the authors compare and contrast offering Green IS as a stand-alone course versus the development of Green IS modules and activities for a variety of computing courses.

Papers contributing to this theme are:

Green IS in teaching – specialist or generalist?
Colin Pattinson and Neil A. Gordon

Selecting appropriate frameworks for understanding how sustainability concepts are applied to solving global problems such as those addressed by United Nations Millennium Development Goals,
Linda Jo Calloway

Green IT in the IS Curriculum Can Generate Enrollment Increases
Jeffrey W. Merhout,

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Theme: Driving Behavioral Change through Information Systems

A common theme identified in the following papers is that there are many current environmental issues to be aware of; the challenging part is changing behavior surrounding these issues. However, information systems enable many applications that aid with this process.

One of the greatest attributes seen throughout these systems is their ability to provide immense amounts of data and information, which is most beneficial when aiming to change behavior of both consumers and businesses. A common denominator in these applications is the goal of empowering the user to make better decisions by providing the data that is necessary to convince and the resources necessary for the follow-through.

This section first provides an overview of information systems enabled "green" applications and then provides more detailed analyses of two specific applications, first in the transportation industry, in the forestry industry in business and IT management. By further developing information systems that enable "green" applications and increase information dissemination, we can further drive behavioral change towards more environmental friendly lifestyles.

Papers contributing to this theme are:

Doing the "Right" Thing for the Environment Just Got Easier, With a Little Help from Information Systems
Joseph Cazier, Brandy Hopkins

Challenges when digital services for sustainable everyday travel is innovated
Raul Carlson, Anders Hjalmarsson, Mikael Lind, Daniel Rudmark:

The Role of FMIS in Sustainable Forest Management Practices: Comparison and Future Direction
Ron Berger

Towards Sensor Networks: Improved ICT Usage Behavior for Business Continuity
Elizabeth Avery Gomez

Application driven IT service management for energy efficiency
C. Cappiello, A. Ferreira, M.G. Fugini, B. Pernici, P. Plebani

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Theme: The big picture, theories, frameworks, taxonomies and visions

In the call for Abstracts and then Short Papers for this workshop we asked for critical pieces that would reflect the authors' views on the scope and direction of Green IS as a field of research. This set of papers takes a broad approach to this topic beyond their own immediate research agendas and presents ideas and concepts, overviews and speculation as to the scope and direction of the field.

Papers contributing to this theme are:

Crossing Boundaries for Institutional Sustainability
Helen Hasan

Opinion: Diffusion Theory and Sustainability of IS Innovations
Daphne Simmonds, Rosann Webb-Collins

Sustainable economic ICT strategy: a proposed framework
Bing Qian Zhang, Kay Fielden

Studying Green Information Systems as Practice (Green IS-as-practice)
Mohamad Taha Ijab, Alemayehu Molla, Say Yen Teoh

Creating a Taxonomy of Green IT / IS, Corporate Sustainability and Corporate Social Responsibility
A Literature Review Mauricio Marrone, Nils-Holger Schmidt, Lutz M. Kolbe

Green IT – Where to from here?
Geoffrey N Dick, Ethan M Case:

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